

REMARKS

Status of the Claims

- Claims 1, 3, 5-19, 19, 21, and 23-27 are pending in the Application.
- Claims 10-18 and 31-33 are withdrawn from consideration.
- Claims 1, 3, 5-9, 19, 21, and 23-27 are rejected by the Examiner.
- Claims 1 and 19 are amended.

Claim Rejections Pursuant to 35 U.S.C. §112

Claims 25-27 stand rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Specifically, the present Office Action dated 6/21/07 indicates the specification does not reasonably provide enablement for “shredding XML values from the binary large object”. Applicant respectfully disagrees.

Applicant respectfully submits that one of skill in the art would know, at the time of the invention, how to shred XML values from a binary large object. As an example, Microsoft® Corporation has shipped, since 2001, the .NET framework which contains a class called XmlReader. This class allows a managed client to shred XML data from a binary stream such as a file or a BLOB column in SQL Server. The XmlReader class can also shred XML values stored in an XML column in SQL Server. Thus, one of skill in the art has had access to software that shreds XML data from a BLOB as early as 2001. This fact is further substantiated by issued U.S. Patent No. 7,165,239 filed on July 10, 2001 that describes aspects of the XmlReader class mentioned above.

In addition, non-patent articles have discussed the shredding process. An example article is entitled “Storing and Querying Ordered XML Using a Relational Database System” by Igor Tatarinov, Stratis Viglas, Kevin Beyer, Jayavel Shanmugasundaram, Eugene Shekita, and Chun Zhang, published in ACM SIGMOD, June, 2002. Thus, information concerning shredding XML was well known in the art at least one year before the present application was filed. A copy of the above-referenced article is attached for reference.

Accordingly, Applicant respectfully submits that one of skill in the art, at the time the application was filed, would have known how to shred an XML value from a large binary

Object (BLOB) as recited in the present claims. Applicant respectfully requests reconsideration and withdrawal of the 35 USC §112 rejection of Claims 25-27.

Claims 1, 3, 5-9, 19, 21, and 23-24 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite. Specifically, it is unclear from where the claimed XML values are shredded.

Claims 1 and 19 are amended to more clearly define that the primary XML index is populated by shredding XML values stored as the binary large object in the XML column of the primary table. Applicant notes that the first element of Claims 1 and 19 creates a primary table structure to hold XML data as a binary large object in an XML column. It is from this XML column that the binary large object is shredded. Applicant respectfully requests reconsideration and withdrawal of the 35 USC §112 rejection of independent Claims 1 and 19 and the corresponding dependent Claims 3, 5-9, 21, and 23-24.

Claim Rejections Pursuant to 35 U.S.C. §103 (a)

Claims 1, 3, 5-9, 19, 21, 23-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,584,459 to Chang et al. (Chang) in view of US. Patent Publication No. 2005/0055334 to Krishnamurthy. Applicant respectfully traverses the rejection.

Chang teaches:

“In accordance with the present invention, an XML extender for a computer-implemented relational database system is disclosed for storing, querying, and retrieving structured documents. Generally, relational extenders define and implement complex data types and extend the tables within the relational database with the new data types. The XML extender provides a new Abstract Data Type (ADT) DB2XML, which can be specified as a column data type, and includes several User Defined Functions (UDFs) for storing, searching, and retrieving XML documents internally, as DB2.RTM. Character Based Large Objects (CLOB), or externally, in flat files or Uniform Resource Locators (URLs), for example.”
(col. 3 lines 48-60).

Applicant submits that Chang teaches an extender that provides a new abstract data type for storing querying, and retrieving structured documents internally as CLOBs or

externally, in flat files or URLs. (See Chang, Abstract). Applicant notes that a CLOB and a BLOB are different data types and that Chang teaches the use of a CLOB with an extender that defines a new data type. Whereas Claim 1 recites that a primary table structure holds XML data as a BLOB and that the BLOB is shredded to populate the XML index, Chang teaches no such functionality.

Krishnamurthy teaches a method of indexing documents efficiently. Applicant notes that Krishnamurthy claims priority to a provisional application dated September 4, 2003. The attached 37 C.F.R. §1.131 declaration establishes that the present invention was under control by the inventors at a date earlier than that of the provisional application of Krishnamurthy. As evidence of that prior date of invention, a Functional Specification is also attached. Page 1 of the attached Functional Specification indicates that the document was edited for a second time on June 3, 2003. The June edit replacing an earlier April 29, 2003 edit. The attached Functional Specification includes information related to the shredding of XML data from a BLOB. As an example, pages 11-12 of the attached Functional Specification provide the table-valued function code that is also recited in the as-filed application in paragraph 0059 that indicates the shredding of values from a BLOB located in an XML column.

Since the attached declaration provides evidence that the present invention existed before the reference date of Krishnamurthy, then Krishnamurthy is disqualified as prior art to the present application. As a result, the current 35 U.S.C. § 103(a) rejection lacks a prior art reference that teaches shredding XML values stored as a binary large object. Applicant respectfully submits that the current combination of reference art that includes the disqualified art of Krishnamurthy fails to establish a prima facie case of obviousness under 35 U.S.C. § 103(a) rejection because all of the elements of the rejected claims are not found in prior art references. Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of Claims 1, 3, 5-9, 19, 21, 23-27 as these claims patentably defined over the cited qualified prior art.

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Conclusion

In light of the amendments, the discussion above, and the attached evidence, Applicant respectfully submits that all pending claims patentably define over the cited art. Applicant respectfully requests reconsideration and withdrawal of the rejections of all pending claims.

Respectfully submitted,

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